WILDERNESS EVALUATION

Nason Ridge - 617042

19, 361 acres

OVERVIEW

History

The Nason Ridge roadless area was inventoried and allocated to various management categories during the Alpine Lakes Area management planning process. This area was not recommended for wilderness, but a portion of this area is currently being managed as a Special Area under the Alpine Lakes Area Land Management Plan. The Northwest Forest Plan allocates the upland areas into Late Successional Reserve and administratively withdrawn, and the lower elevation portions in matrix.

The 2006 inventory removed approximately 1,832 acres from previous inventory due to nonconforming uses such as road construction and logging; 1,862 acres were added to the previous inventory as they met the criteria for a potential wilderness area (PWA) as described in Forest Service Handbook (FSH) 1909.12, Chapter 70. Table 1 depicts the 1990 Wenatchee National Forest Land and Resource Management Plan allocations for the 2007 inventoried lands.

Table 1--Management Area Percentages (rounded)

Wenatchee National Forest LRMP				
GF	SI1	SI2	ST1	ST2
10%	66%	1%	18%	3%

Location and Access

The area is located entirely in Chelan County just east of Stevens Pass on the Lake Wenatchee portion of the Wenatchee River Ranger District. Road access is via U.S. Highway 2, the Butcher Creek Road, and the Smithbrook Road. The area consists of a ridge lying between Nason Creek and Lake Wenatchee. Trails in the area include the Nason Ridge Trail, Round Mountain, Merritt Lake, Rock Lake, and Snowy Creek trails.

Geography and Topography

The Nason Ridge Potential Wilderness Area lies along the northeastern edge of Nason Creek. Elevations range from 2,400 to 7,100 feet. The land types associated with this area are glacial troughs and scoured glacial troughs with a few cirque basins. Bedrock underlying this area is predominately Cretaceous banded gneiss, Chiwaukum schist, and granitic rocks of the Mt. Stuart batholith on the southwestern edge. About 20 percent of the area is made up of cliffs and talus. Larger stream bottoms are filled with alluvium and reworked glacial outwash. Due to the proximity to Glacier Peak, some of the soils have formed in volcanic ash and pumice but the majority of the soils in this area have developed in granitic and glacial residuum.

Precipitation averages between 50 and 80 inches per year with the majority falling as snow.

Current Uses

The current primary use is dispersed recreation. The major activities include hiking, horseback riding, and mountain biking. The eastern end of the Nason Ridge Trail is also open to motorbikes. The area serves an important function as a non-wilderness backcountry area. It is one of the few areas on the district where mountain bikes can access subalpine ecosystems. It is also the best place on the district to send groups that want to hike to a lake, but their activities are not wilderness dependent or wilderness compliant. For example, groups can be in excess of the wilderness group size limit of 12. The Nason Ridge area also receives significant winter use from both backcountry skiers and snowshoers.

Appearance and Surroundings

The area has a great deal of visual variety of landform, vegetation, rock formation, and water. The area is steep with a rounded ridge top. Hillsides are highly textured. There is sparse vegetation on ridge tops and a broken, open, mixed conifer vegetation pattern on most of the side slopes. Fall colors are present along the mid and upper slopes of the ridge. The area is viewed as foreground and middle ground from U.S. Highway 2 and from the Smithbrook Road #6700. The area is the primary viewshed from the north shore of Lake Wenatchee, with peaks such as Mt. Mastiff having dramatic alpine summits.

The area is large enough and visitors are far enough away from major roads in some places that they get the feeling they are in a natural area relatively distant from human activity and development. However activities such as Highway 2, the railroad, the power lines, and the development at Lake Wenatchee area readily viewed from both valley bottoms and the ridge top vistas of the Nason Ridge Trail. The sweeping panoramic views from the top of Nason Ridge give a sense of connection to the greater North Cascades. Merritt Lake is extremely impacted due to heavy and unskilled use. The other lakes in the area are pristine, due to the more difficult access.

Key Attractions

The ridge top and the panoramic views obtained from it are a key attraction. It is readily accessible from Highway 2. The area is suitable for both day and overnight use. Alpine Lookout, Merritt Lake, Rock Lake, and Rock Mountain are focal attractions.

CAPABILITY FOR WILDERNESS

Level of Natural and Undeveloped Environment

This area was considered for wilderness during the development of the Alpine Lakes Area Land Management Plan, but was not recommended for wilderness. There are obvious signs of human activity within this area. The trail system is well developed and there is a fire lookout that is occupied during fire season. A radio repeater is also installed at the lookout. The lookout is serviced by use of helicopter. Extensive development along U.S. Highway 2 to the south and along Lake Wenatchee to the north can be readily seen and heard from the

ridge. Motorcycle and mountain bike use is allowed along the eastern portion of the ridge from the Lower Nason Ridge Trailhead to the Alpine Lookout. The type of use and impacts at Merritt Lake would be problematic for managing as wilderness.

The Nason Ridge PWA is impaired by light pollution from the development along the Highway 2 corridor and the Stevens Pass Ski Area. The eastern portion of the PWA (60 percent of the PWA) rates a Class 3 on the Bortle Scale, whereas the western portion rates as a Class 4 (33 percent of the PWA) and 4.5 (7 percent of the PWA). A Class 3 Rural Sky has some indication of light pollution on the horizon. Clouds may appear faintly illuminated in the brightest parts of the sky near the horizon, but are dark overhead. The Milky Way still appears complex. Light domes from population centers may appear on the horizon (10-15 degrees above horizon). Visual observing is still relatively unimpaired. Time lapse photography could be impaired by light pollution.

A Class 4 Rural/Suburban Transition Sky exhibits fairly obvious light-pollution domes over population centers in several directions. The Milky Way well above the horizon is still impressive but lacks all but the most obvious structure. Clouds in the direction of light pollution sources are illuminated but only slightly so, and are still dark overhead. Modest to serious impact to deep sky observing and imaging occurs. A Class 4.5 sky portrays the Milky Way as washed out but still visible on the horizon. Light domes from populated areas are up to 45 degrees above the horizon.

Water quality data is not available for most of the PWA, however due to the relatively low level of disturbance water quality is assumed to be high. A portion of the Little Wenatchee River is classified by the Washington State Department of Ecology as Category 1, which means the segment met tested standards. Other portions of the Little Wenatchee are classified by the Washington State Department of Ecology as Category 5, which means the area is in need of a water cleanup plan due to polluted waters.

Noxious weeds are established at two trailheads accessing this area as well as along the road corridors. The probability of introducing noxious weeds into the area varies depending on habitat. The south facing slopes on the eastern end of the ridge have higher potential due to being dry and open. The exposed soil in the Round Mountain burn (1994) is also vulnerable. The portions of the ridge with heavy tree canopy would be less susceptible. Noxious weeds are being treated at trailheads and along roads on a semi-annual basis.

Non-indigenous fish have been introduced to the lakes in this area.

Level of Outstanding Opportunities for Solitude or Primitive and Unconfined Recreation

Some hiking challenges are provided by steep trail grades and by trail switchbacks. Some challenging experiences and destinations can be found off-trail but have limited use. Nason Ridge provides several overnight camping destinations, and the Nason Ridge Trail itself can absorb a multi-day trip.

There are good opportunities for primitive outdoor recreation in this area, although the size of the area and access to the area are such that it is possible to visit any location in a single day. There are opportunities for goat and deer hunting, horseback riding, motorcycle riding, mountain bike riding, hiking, and overnight backcountry camping.

The area offers limited opportunities for solitude. Use is confined to a few major access trails and to the ridge top due to the steep nature of the area's side slopes. Overnight use is confined primarily to the lakes due to scarceness of water along the ridgeline. The heavily used U.S. Highway 2 corridor and the adjacent railroad and power line corridors bring the sights and sounds of human intrusion all the way to the ridge tops.

Special Features

The area is noted for its mountain goat herd. Washington Department of Fish and Wildlife have been trapping and tagging goats for study. The area is within the North Cascades grizzly bear recovery zone, in the lynx secondary recovery area, and provides source habitat for wolverine. All of these species have very limited distribution within the region.

This area serves an important function in providing a non-wilderness alternative that can still support overnight use, visitation to lakes, and access to subalpine environments. The Alpine Lookout is somewhat unique in that it is staffed without being accessible via road.

This PWA includes one rare plant species, Great Smokey Mountain Sedge (*Carex proposita*).

Manageability of Boundaries

The PWA boundaries are somewhat difficult to locate except for where the boundaries come to edge of roads. The boundaries appear to follow timber type lines rather than readily definable topographic boundaries. The heavily used U.S. Highway 2 corridor and the adjacent railroad and power line corridors lie along the southern boundary of the area. Snowmobile incursions are likely to be an issue in some portions of the area where there is winter road access, such as in the Round Mountain area. Wildland fire use would be difficult to manage on mid-slope boundaries without the benefit of a fuel break.

AVAILABILITY FOR WILDERNESS

Recreation

The area has good potential for unroaded motorized and non-motorized types of recreation. Designation of the area as wilderness would displace mountain biking, a use that has been increasing in popularity in this area with local riders in recent years. Use of the area by motorized users is relatively low, but these users would be displaced as well. The area is used extensively by local organizational camps, which bring large unskilled groups. This use would need to change unless an allowance was made for a larger group size limit. In general, this area has provided an important niche for where to send users that aren't entirely wilderness compatible but wish a backcountry setting.

For the central Puget Sound region, Chelan and Kittitas Counties are the first stop on the dry eastside. Leavenworth, a Bavarian theme town, has successfully promoted tourism since the 1960s. The wide variety of available outdoor activities has long provided a strong tourism draw and areas of concentrated car camping in the Icicle and at Lake Wenatchee. In recent years the town has promoted the proximity to high quality outdoor recreation experiences as a reason to visit Leavenworth and the Lake Wenatchee areas. Outdoor activities actively promoted in the Nason Ridge PWA include hiking, mountain biking, and

birdwatching. Nason Ridge is also the scenic backdrop for Lake Wenatchee and the Highway 2 Scenic Byway.

If linked to the Washington State population as a whole (IAC SCORP Report, 2002), recreation preferences will favor hiking and nature-based activities (53 percent and 43 percent of the population respectively). Twenty-one percent of the population bicycles (primarily road biking), nine percent of the population recreates with off-road vehicles, and three percent participates in equestrian activities (lumping use of developed equestrian centers and backcounty). The National Study on Recreation and the Environment (Cordell, 2004) offers a similar data set for Washington State residents age 16 and older. Of the types of use that could occur in PWAs, 47 percent of the population day hikes, 45 percent visits wilderness or primitive areas, 28 percent mountain bikes, 22 percent backpacks, 21 percent drive off-road, 7 percent horseback ride on trails, and 6 percent go snowmobiling.

All of these activities are on a growth trend, and recreational supply is limited. Continuing to provide a variety of settings for recreational experiences will compliment the tourism marketing strategies of these communities. If this PWA is designated as wilderness, tourism-based hiker use would likely increase due to media publicity. This in turn would increase tourism-based revenue.

Table 2--Miles of recreation trails

Motorized Trails	Non-motorized Trails	Snowmobile Trails
6	23	0

Wildlife

Mountain goat winter and summer range is in the area and occupied by a small herd. The cliffs and talus provide excellent habitat for species dependent on this type of habitat.

The area contains habitat for federally listed Canada lynx, gray wolf, grizzly bear, and northern spotted owl. The Canada lynx, gray wolf, and grizzly bear use a variety of successional stages across the landscape as their habitat, while the spotted owl primarily uses late-successional forests. Portions of the PWA are inside designated critical habitat for the northern spotted owl, as well as late-successional reserves allocated by the Northwest Forest Plan (NWFP). The overlap between critical habitat units (CHU) and LSR is approximately 70 percent on the Okanogan-Wenatchee National Forest. Providing connectivity among spotted owl populations may be the most important ongoing function of critical habitat.

Each PWA provides varying levels of habitat for focal wildlife species. To help evaluate the habitat this area provides, the following information was provided: the focal species emphasized in the area, amount of habitat for each focal species, the priority ranking for the habitat (based on conservation assessments and recovery plans), and the proportion of the total habitat available on the Forest that is within the PWA.

Table 3--Availability of habitat for federally listed Threatened and Endangered wildlife species and R6 Focal Species

Wildlife Species	Acres Habitat	Habitat Priority Ranking (1=high, 2-mod, 3=low)	%Total Forest Habitat In Evaluation Area
Grizzly Bear	13,500	2	1
Canada Lynx	101	2	<1
Wolverine	12,243	2	1
American marten	4,616	3	1

A key issue relative to the sustainability of wildlife habitats is the identification of the amount of dry forest that is in a late-successional habitat area (LSHA). LSHAs that occur in dry forests can be at high risk of high severity wildfire, and insects and disease that reduce the sustainability of the late-successional habitats. Active management, such as prescribed fire and thinning, may be needed to restore these habitats and enhance their sustainability.

Table 4--Acres of dry forest habitats that are present within the evaluation area and also within a Late Successional Habitat Area

Late Successional Habitat Area	Acres of Dry Forest
Little Wenatchee	No dry forest

Water and Fish

The Nason Ridge PWA occur in five different subwatersheds (6th field Hydrologic Unit Code): 94 acres, or less than 1 percent of the 15,321 acre lower White River subwatershed; 2,382 acres or 23 percent of the 10,262 acre Lake Wenatchee subwatershed; 6,787 acres or 15 percent of the 45,588 acre upper Nason Creek subwatershed; 1,247 acres or 6 percent of the 22,531 acre lower Nason Creek subwatershed, and 8,390 acres or 33 percent of the 26,344 acre lower Little Wenatchee River subwatershed. In these five subwatersheds, the U.S. Forest Service manages the following percentages in each subwatershed: lower White River (87 percent); Lake Wenatchee (60 percent); upper Nason Creek (95 percent); lower Nason Creek (47 percent) and lower Little Wenatchee River (99 percent). All of these subwatersheds drain into the Wenatchee River subbasin (4th HUC).

Stream reach conditions in the upper Nason and lower Little Wenatchee River subwatersheds that respond to natural and human caused disturbances were evaluated as fair because collected stream data values were lower than expected values measured in high functioning stream habitat elsewhere on the Okanogan-Wenatchee National Forest. Subwatershed vegetation conditions were somewhat altered from expected natural forest conditions; analyzed road effects were moderate. Vegetation condition and road effects considered cumulatively were rated fair. When vegetation condition and road effects were combined with measured stream responses to summarize overall subwatershed condition, these subwatersheds were rated fair.

When compared against unmanaged subwatersheds in good condition on the Okanogan-Wenatchee National Forest, some vegetation condition has changed from expected condition and road density is moderate for lower White River subwatershed. Considering changes in vegetation and road density in combination, this subwatershed was rated fair.

Stream reach data has not been collected in sufficient quantity for analysis: therefore, watershed condition has not been evaluated.

Stream reach conditions in the lower Nason Creek subwatershed that respond to natural and human-caused disturbances were evaluated as fair because collected stream data values were lower than expected values measured in high functioning stream habitat elsewhere on the Okanogan-Wenatchee National Forest. Subwatershed vegetation conditions were altered from expected natural forest conditions; analyzed road effects were substantial. Vegetation condition and road effects considered cumulatively were rated poor. When vegetation condition and road effects were combined with measured stream responses to summarize overall subwatershed condition, this subwatershed was rated poor.

When compared against unmanaged subwatersheds in good condition on the Okanogan-Wenatchee National Forest, vegetation condition has changed from expected condition and analyzed road effects are substantial in the Lake Wenatchee subwatershed. Considering changes in vegetation and road density in combination, this subwatershed was rated poor. Stream reach data has not been collected in sufficient quantity for analysis; therefore, watershed condition has not been evaluated.

Habitat supporting listed spring Chinook, steelhead, and bull trout in the Wenatchee subbasin, downstream of the proposed Nason Ridge PWA, were designated as critical habitat by the National Marine Fisheries Service in January 2006.

High lakes located within this area include Lost Lake, Rock Lake, Crescent Lake, Canaan Lake, Merritt Lake, and one small additional unnamed lake. These lakes have been stocked with non-indigenous trout. Merritt Lake supports a population of non-native eastern brook trout. Populations of westslope cutthroat trout are present in Lost and Crescent Lakes. All of these lakes receive considerable fishing pressure. There are no anadromous fish streams within the proposed Nason Ridge PWA, although the streams originating in the Nason Ridge PWA flow into designated critical habitat.

The Nason Ridge PWA has a water source protection area totaling 4,873 acres that contributes to a community water system for the Cashmere Water Department.

Range

A portion of this PWA is in a commercial sheep allotment however actual use has remained in that portion of the allotment outside the PWA.

Table 5--Percentage of grazing suitability areas and current allotments

Percent Area Suitable for Cattle Grazing	Percent Area Currently in Cattle Allotments	Percent Area Suitable for Sheep Grazing	Percent Area Currently in Sheep Allotments
1	0	4	12

Vegetation and Ecology

Grand fir, ponderosa pine, and Douglas-fir dominate low elevation stands. Mid-elevation forests are mainly Pacific silver fir, western hemlock and western red cedar. Upper slope species include subalpine fir, whitebark pine, lodgepole pine, and Engelmann spruce.

Avalanche paths containing willow, mountain ash, Douglas maple and Sitka alder are common. Periodic avalanches also stimulate forbs and grasses important to mountain goats found in the area.

The area contains significant amount of standing volume. Common species include subalpine fir, Pacific silver fir, lodgepole pine, western hemlock, western white pine, and Douglas-fir. The areas suitable for timber harvest in the Nason Ridge PWA would no longer be available for harvest activities if designated as wilderness.

With wilderness recommendation options to utilize mechanical treatments to manage vegetation would be precluded. Generally, the priority for restoration treatments occurs within the wildland urban interface (WUI) or within the dry and mesic forest groups. Because WUI represents nearly one half of the PWA, the prohibition on restorative treatments is a concern. The concern is decreased, however, by recognizing that dry and mesic forest is only slightly represented in the area. However, there may be a need to respond to needs in small portions of the WUI.

The Healthy Forest Restoration (HFRA) Act authorizes direction to implement fuel reduction projects in the WUI. The HFRA prohibits authorized projects in wilderness areas.

Timber Harvest Suitability

The underlying criteria for determining timber harvest suitability are found in the Forest and Rangeland Renewable Resources Planning Act of 1974, 36CFR219.12, and Forest Service Handbook 1909.12, Chapter 60.

For the Colville and Okanogan-Wenatchee National Forests, the general criteria for timber suitability that will be used for timber harvest suitability are:

- Is it forest land (10 percent crown cover minimum, productivity >20 ft^3/ac/yr).
- The area has not been withdrawn from timber harvest or production.
- Soil, slope, or other watershed conditions will not be irreversibly damaged (based on soil attributes for erosion, instability, or compaction potential, slopes >65 percent, and certain land types)
- Reforestation can be assured within five years (lack of shallow soils, low frost heave potential, low surface rock, plant community type, certain land types, and elevation <5,500 feet)
- Economic and technologic viability (<0.5 miles from existing transportation system, species value or condition, volume availability, logging systems)

In consideration of all the criteria for determining timber harvest or timber production suitability and not just the fact that harvestable species can grow at a specific location, it appears this PWA does not have conditions that pass all the criteria. The main criterion for failure is that unacceptable resource impacts would likely occur due to road construction activities. This does not preclude helicopter operations that could fly material over sensitive areas to adjacent road systems. However, in most if not all cases helicopter logging and the associated expenses (such as manual slash treatments) would not be an economically viable option.

Table 6--Stand data percentages

Suitable for Timber Harvest	Forest Groups		WUI	
0%	Parkland	13%	Total WUI	45%
	Cold Dry	2%	WUI in Dry and Mesic Forest	17%
	Cold Moist	71%		
	Mesic	6%		
	Dry	1%		
	Non-forest	6%		

Fire

The area contains mesic, moist, and some cold forest types that include both mixed and high-severity fire regimes.

Large fires were prevalent in the railroad construction years (ca.1880s) in the Nason Creek drainage. The eastern-most portion of this area was affected by the Round Mountain fire in 1994.

Annual fire occurrence is light to moderate with most started by lightning. The vegetation type is mostly moist forest types with Douglas-fir, western white pine, grand fir, and western hemlock transitioning to Pacific silver fir with Engelmann spruce, subalpine fir, and whitebark pine on ridgetops. South facing slopes from lower to mid elevations are Fire Regime III (mixed severity) with Condition Classes II and III. Upper slope and ridge tops are predominately Fire Regime V (+200 years, stand replacement type) and are in Condition Classes I and II. Whitebark pine stands and meadows adjacent to subalpine fir need fire to persist.

Prescribed burning or wildfires can potentially improve goat forage habitat.

Insects and Disease

The Wilderness Act of 1964 allows for the control of insects and disease, but taking such actions in wilderness is rare. Forest Service wilderness policy (Forest Service Manual 2324.11) directs the agency "to allow indigenous insect and plant diseases to play, as nearly as possible their natural ecological role". Policy also directs the agency to "protect the scientific value of observing the effect of insects and disease on ecosystems and identifying genetically resistant plant species", and finally, "to control insect and plant disease epidemics that threaten adjacent lands or resources."

A portion of this PWA is comprised of a parkland forest group and is likely to support stands of whitebark pine. Due to a combination of anthropogenic causes (introduced white pine blister rust, global warming, and fire suppression leading to high severity wildfires) coupled with predation from native mountain pine beetles, whitebark pine stands are at risk across their range. These whitebark pine stands are of inherent value as a plant community, for providing important habitat for wildlife including the federally listed grizzly bear, and for their aesthetics in contributing to the social setting. Wilderness designation would limit restoration options for these stands. Manipulations would only be considered in order to protect the composite wilderness resource, and only as a last resort to preserve naturalness at the expense of trammeling.

An aerial survey of the area was completed in 2007. The most extensive damage reported was defoliation by western spruce budworm. About 1,200 acres were mapped, with an extensive area between Whitepine Campground and Alpine Lookout. Much less defoliation was reported in 2007 than in 2006.

There were fewer reports of balsam woolly adelgid damage in 2007 than in 2006. A total of about 300 acres was mapped, mostly north of Nason Creek and east of Royal Creek.

Very little damage by mountain pine beetles was reported in 2007.

A three acre pocket of Douglas-firs killed by Douglas-fir beetles was detected.

Threatened, Endangered, and Sensitive Plant Species

This PWA includes one rare plant species, Great Smokey Mountain sedge (*Carex proposita*).

Noxious Weeds

Noxious weeds are established at two trailheads accessing this area as well as along the road corridors.

Minerals and Soils

This area is underlain by pre-Tertiary metamorphic rocks and Cretaceous granitic rocks. The area has not been studied in detail by the U.S. Geological Survey, but available information indicates that the area has reported occurrences of molybdenum, graphite, garnet, asbestos, and quartz. None of the occurrences, however, are suspected as having commercial value. There is currently (December 2, 2004) about 12 recorded mining claims just outside the area to the north within the Little Wenatchee River/Rainy Creek drainage. None have a reported history of significant exploration or production. The eastern two miles of the area have been classified as prospectively valuable for coal resources, but available information indicates that any deposits would not be of commercial value. The area is not classified prospectively valuable for any other leasable commodity and it is not encumbered by any mineral leases or pending lease applications.

The combination of geography, land type, and precipitation generally give low inherent soil productivity. Productivity for wood fiber is generally low to moderate on the scoured glacial troughs, and moderate to high on the glaciated troughs. Due to parent material and soil development, most of the soils within this PWA have a high to moderate erosion hazard.

Cultural and Heritage Resources

This area would have had some attraction to native people but not to the same extent as the local river corridors. There have been only a few cultural resource surveys conducted in the area to verify the presence or absence of sites. Historic uses are associated with early twentieth century sheep grazing. There was a fire lookout on Rock Mountain from 1933 to 1973. The original Alpine Lookout was constructed in 1936 but was replaced by a new structure in 1975, and again in 2006. Portions of the area closer to the highway and railroad were influenced by development of those features. Unless a site has been determined to be ineligible for the National Register, it is managed as a significant site until such a determination is made. Cultural sites are protected by law; however, a

wilderness designation or a roadless designation would afford additional protection to cultural sites from ground disturbing activities.

Land Uses and Special Uses

Other than the temporary use of the area by outfitters and guides under permit or the occasional authorization of a recreation group event, there are no special land uses under permit occurring within the area. Nason Ridge serves an important niche for outfitter guides such as organizational camps that require areas where they can bring larger groups for overnight or day trips. Merritt Lake is a relatively easy hike that affords an obtainable destination for less skilled users.

The Nason Ridge Potential Wilderness Area falls entirely within lands ceded to the U.S. Government under the Yakama Treaty. Indian tribes hold rights reserved under treaty and recognized in statutes, executive orders, and policies. Generally, these included rights to fish at usual and accustomed grounds and stations, the right to hunt and gather on open and unclaimed lands, the right to erect temporary houses to cure fish, and the right to pasture horses and cattle on open and unclaimed lands.

Private Lands

There is a substantial holding of private timber land owned by the Longview Fibre Company adjacent to the area. The land manager has expressed concern that wilderness designation could adversely affect the potential for fire to spread onto adjacent private lands due to the fuel condition of forested stands.

NEED FOR WILDERNESS

Location and size of other wildernesses in the general vicinity, and distance from area and population centers:

The Nason Ridge area is very close to the boundaries of the Henry M. Jackson Wilderness (100,356 acres) and the Alpine Lakes Wilderness (362,789 acres), but it is not immediately adjacent to either of these wildernesses. The Glacier Peak Wilderness (570,573 acres) is also nearby. The area is within one to four hours of driving time from population centers such as Seattle-Tacoma, Yakima, Tri-Cities, Spokane, and Wenatchee.

Present visitor pressure on other wildernesses, trends, and changing patterns of use:

Nearby wildernesses include the Glacier Peak, Henry M. Jackson, and Alpine Lakes. These and other wildernesses throughout the state serve a growing population from both sides of the Cascade Range. Most of the users are from the greater Puget Sound area. The portions of these wildernesses with easy access to spectacular destinations receive heavy use. In general there is already adequate wilderness on the east slope of the Cascades to absorb current and future recreation demand while maintaining moderate to low levels of use. The addition of this area as wilderness would be likely to draw increased use and publicity because of the relatively large size and trail system, access to lakes, subalpine terrain, and ease of access from Highway 2. The fact that this area provides non-wilderness backcountry with lakes greatly enhances management of existing wilderness on the district by being able to offer a non-wilderness alternative to less skilled groups.

In ranking this PWA for its potential to provide a high quality wilderness recreation setting it ranked as moderate. The area is very accessible off of Highway 2. The PWA provides high quality scenic destinations that would attract wilderness users. In addition, interconnected trail systems would facilitate both day trips and overnight use. However, this PWA is not as high a priority for providing a wilderness recreation setting as those PWAs that would provide an altogether new setting to the National Wilderness Preservation System, or are contiguous with existing wilderness.

Extent to which non-wilderness lands provide opportunities for unconfined outdoor recreation experiences:

Nason Ridge is a high quality backcountry area that provides a trail system to high lakes, ridges, and peaks. In addition to being used by hikers and equestrians, the Nason Ridge area fulfills an important niche for non-motorized uses that are prohibited in wilderness (large groups, motorcycles, and mountain bikes) but otherwise want an alpine natural environment in which to recreate. Nason Ridge generally receives moderate levels of use, with high hiker use on the popular Merritt Lake Trail.

The Heather Lake PWA lies west and north of Nason Ridge. This area is adjacent to the Henry M. Jackson Wilderness, which is accessed via the Heather Lake, Top Lake, and Minotaur Lake Trails. Heather and Minotaur Lakes receive moderately high use, and Top Lake receives light to moderate use from hikers and horse users.

To the north, the Twin Lakes PWA primarily provides access to the Glacier Peak Wilderness. The Twin Lakes Trail travels about one mile through this area before entering the Glacier Peak Wilderness. Because this trail is adjacent to the Tall Timbers Ranch it receives a high visitation rate from organized groups.

Further to the north, the Rock Creek portion of the Entiat-Chelan PWA provides a network of non-motorized trails also adjoining the Glacier Peak Wilderness. Most of the non-motorized trails in this area receive less use do to the absence of lakes, but due attract light levels of use. The Carne Mountain Trail attracts high levels of use from hikers, climbers, and hunters. The motorized portion of the PWA is part of a much larger OHV trail system which is one of the most popular in the state.

To the south the Alpine Lakes Adjacent PWA contains many separate parcels surrounding the periphery of the wilderness. These parcels are very diverse in the recreation opportunities they afford. The areas closest to Nason Ridge (along the northeast boundary of the Alpine Lakes Wilderness) include the Lanham Lake Trail and one mile each of the Whitepine Trail and Chiwaukum Creek Trail. This area is known for its backcountry skiing and snowboarding opportunities.

The need to provide a sanctuary for those biotic species that have demonstrated an inability to survive in less than primitive surroundings or the need for a protected area for other unique scientific value or phenomena:

Wildlife

Northern spotted owl, grizzly bear, lynx, American marten, and wolverine and the resident mountain goat herd are sensitive to human activities associated with roads.

Fish

Several native species in the interior Columbia River Basin have demonstrated an inability to survive in less than primitive surroundings, especially the bull trout. In addition to habitat changes on National Forest System lands, other factors off forest such as hydropower generation, hatchery programs, harvest, and changing ocean conditions further challenge the persistence of some far-ranging native species. Broad-scale assessments have demonstrated a positive correlation between unroaded areas and persisting native fish stocks. Often, assessments like these don't differentiate between wilderness and roadless areas; rather they combine the two into an "unroaded" category. These assessments show current strongholds (most secure and robust populations) are dependant on wilderness and roadless areas. Some of the more resilient native fish populations in the Interior Columbia Basin are located in unroaded areas on National Forest System lands.

For the Okanogan-Wenatchee National Forest PWAs were assigned an aquatic ranking based on federally listed and sensitive fish species that are sensitive to human disturbances. A high ranking was assigned when listed fish species occur in the PWA or when ecological process including high quality water help sustain listed fish species downstream of the PWA. All other PWAs are ranked low. This PWA is assigned a high ranking based on these factors.

Rare Plant Species

An analysis was completed to prioritize which PWAs would contribute the most to providing refugia for those plant species on the species of interest/species of concern (SOI/SOC) list. The analysis ranked three factors. The first factor, the total number of sites occurring within the PWA, ranked as low for this PWA. The second factor, which ranked as high for this PWA, examined the degree of rarity of any SOI/SOC species present, and also recognized the importance of individual PWAs in supporting a high incidence of populations relative to Washington State as a whole.

PWAs are generally unsurveyed for rare plants due to a relative lack of projects occurring in these areas. Thus an additional factor examined the potential for the PWA to support SOI/SOC species. Based on databases, first the SOI/SOC plant species were identified that are present within a five-mile radius of the PWA, but are not known to occur within the PWA. Then the PWA was analyzed to see if the potential habitat for these species occurs within the PWA. Based on this analysis, this PWA ranks as high.

Finally, a composite score was assigned to each PWA based on combining each of the rankings described above. This PWA ranks overall as high priority for preserving rare plant refugia with a wilderness designation.

Ability to provide for preservation of identifiable landform types and ecosystems:

This area represents the East Cascades Ecoregion according to Bailey's Ecoregion Classification System. This ecoregion type is well represented in existing wilderness lands in the Cascade Range.

An analysis compared vegetative cover types that are under-represented in wilderness on the National Forest System in Region 6 with those same cover types present in the PWA. Large-scale cover types were available through existing data layers and represent approximately 14 percent of the vegetative cover of this PWA (approximately 2,700 acres). These types include forb lands, non-alpine meadows, and alpine meadows. Taken as a whole, the contribution of underrepresented vegetation types ranks as moderate for the portion of this area with underrepresented cover types, and also as moderate for the number of acres that are represented within this PWA relative to the other PWAs in the planning area.

Some under-represented cover types fill microhabitats such as riparian areas or perched water tables. Such finer scale cover types represented in this PWA include a large stand of cottonwood (associated with the mouth of the Little Wenatchee River and the head of Lake Wenatchee) and potentially sparse amounts of quaking aspen.

In particular, the non-alpine meadow, which comprises approximately 2,100 acres in this PWA, would make a significant contribution within the eastern Washington planning area, as would the area of cottonwood at the head of Lake Wenatchee.